Page 2
Use What You Know Responses will vary.
Text Structure Students should circle the word wait.
Responses will vary.
Reading Strategy: Preview Responses will vary.

Page 3
Reading Strategy: Preview Students should circle the subheading Anatomy of the Ear.
In their responses, students should indicate the section will be about the parts that make up the ear.
Comprehension Check Students should underline the sentence The eardrum is a thin membrane that is stretched tight, like the head of a drum.
Responses will vary.
Text Structure Students should underline the sentences Behind these bones . . . auditory nerve to the brain.
Responses will vary, but students should indicate that the cochlea is filled with liquid and tiny hair cells.

Page 4
Text Structure Students should underline the sentence, For example, when a bell is rung, the metal vibrates.
Responses will vary.
Comprehension Check Students should underline the words the number of times the air vibrates.
In their responses, students should indicate that frequency determines how high or low a sound is (pitch).
Comprehension Check Students should underline loud sounds and circle softer sounds.
Responses will vary.

Page 5
Reading Strategy: Preview Students should underline the subheadings The Act of Hearing and Hearing Problems.
The first section will describe how we hear and the second will describe some problems people can have with their hearing.
Text Structure Students should circle the words collect and funnel.
Responses will vary.
Comprehension Check Students should underline A person with hearing loss may not be able to hear some sounds or may have particular difficulty when there is background noise.
Students may list age, illness, and injury.

Page 6
Reading Strategy: Preview Students should draw arrows to the words blocks, substance, prevented, and artificial.
Responses will vary.
Text Structure Students should underline Earwax is a sticky substance produced inside the ear canals . . .
When earwax builds up, it blocks the ear and causes hearing problems.
Comprehension Check Students should underline when the stirrup bone is prevented from vibrating because of abnormal bone growth.
Responses will vary, but students should indicate that the vibration of the stirrup bone allows sound waves to move to the inner ear.

Page 7
Reading Strategy: Preview Students should underline Deterioration of the cochlea due to age and Injury to the cochlea due to noise.
Both paragraphs will explain problems with the cochlea. The first paragraph will describe problems due to age. The second paragraph will describe problems due to injury.
Comprehension Check Students should underline Hearing aids.
They amplify sound.
Comprehension Check Students should underline When loud noise causes the hair cells in the cochlea to vibrate too forcefully, they can bend or break.
Responses will vary but should include avoiding loud noises.

Page 8
Reading Strategy: Preview Students should underline Turn down the volume and Wear earplugs.
Responses should indicate that the paragraphs will describe two ways to prevent hearing problems.
Comprehension Check Students should underline turn the music volume down low. Experts caution that ear buds should never be worn for more than two hours at a time.
Responses will vary, but may include that exposure to loud sounds, including music, can damage the hair cells in the cochlea and lead to loss of hearing.
Text Structure Students should underline the sentence Wear earplugs during any activity that exposes you to loud noise.
Responses will vary.

Page 9
Comprehension Check Students should underline the sentence Each ten-point increase on the decibel scale represents a tenfold increase in sound intensity over the previous level.
The rock concert is 20 times louder.
Text Structure  Students should underline *Decibels, Example, and Dangerous Exposure.*  
A decibel level of 0 is the lowest sound we can hear.

Comprehension Check  Students should underline 180.  
If you are exposed to that decibel level, you will definitely lose hearing.

Page 10  
Retell It!  Descriptions should indicate that a model of the human ear should have three major parts: the outer ear, the middle ear, and the inner ear. The outer ear includes the outside of the ear, the ear canal, and the eardrum. The middle ear includes the hammer, anvil, and stirrup. The inner ear includes the cochlea.

Reader's Response  Responses will vary.

Think About the Skill  Responses will vary.

Page 12  
Edit for Meaning  
Paragraph 1 error: the exact same sounds  
Correction: different sounds  
Paragraph 2 error: waves are used  
Correction: decibels are used

Page 13  
Focus on Details  
1. vibration  
2. frequency  
3. volume  
4. eardrum  
5. cochlea  
6. artificial  
7. device  
8. wall  
9. funnel  
10. decibel

Reading Strategy: Skim  Students should circle the word *gaze.*  
Six small muscles hold the eyeball in place inside the socket.

Page 17  
Reading Strategy: Skim  Students should underline the words *cornea, iris, pupil, lens, retina, and optic nerve.*  
Responses will vary.

Text Structure  Students should draw a box around the word *lens.*  
Responses may vary. Students should indicate that the lens is a part of the human eye. It is clear and curved and can change its shape to focus light.

Comprehension Check  Students should underline the words *rods and cones.*  
Responses will vary.

Page 18  
Comprehension Check  Students should underline The muscles in the iris control the amount of light that enters the pupil. For example, on a very bright, sunny day, the muscles in the iris will tighten to make the pupil smaller. And *When it is dark . . . take in more light.*  
Responses will vary, but may indicate that sunglasses allow the muscles in the iris to relax more.

Reading Strategy: Skim  Responses will vary, but should mention the lens’s shape-changing and the sharpness of vision.

Comprehension Check  Students should underline, *objects . . . when they’re close and objects . . . when they’re farther away.*  
When looking at a faraway object, one’s lenses are long and flat.

Page 19  
Text Structure  Responses will vary.

Reading Strategy: Skim  Few people have perfect vision.

Comprehension Check  Students should underline the sentence All of these things make for less than perfect vision, unless corrective lenses (eyeglasses or contact lenses) are worn.  
Responses will vary.

Page 20  
Reading Strategy: Skim  Students should circle the sentence *Nearsightedness occurs . . . that are close appear clear.*  
Responses will vary.
**Comprehension Check** Students should underline: Corrective lenses bend the light inward so that it focuses directly onto the retina. Farsightedness would make it difficult to read this page because it makes things close up appear blurry.

**Reading Strategy: Skim** Students should circle the two sentences *Farsightedness occurs . . . distant appear clear.* Responses will vary.

**Page 24**

**Retell It!** Responses will vary.

**Reader's Response** Responses will vary.

**Think About the Skill** Responses will vary.

**Page 26**

**Edit for Meaning**

**Paragraph 1 error:** because it absorbs red light and reflects all the rest

**Correction:** because it reflects red light and absorbs all the rest.

**Paragraph 2 error:** white when it absorbs all light . . . black when it reflects all light.

**Correction:** white when it reflects all light . . . black when it absorbs all light.

**Page 27**

**Focus on Details**

<table>
<thead>
<tr>
<th>Across</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Cornea</td>
<td>1. Sharpness</td>
</tr>
<tr>
<td>4. Pupil</td>
<td>2. Combination</td>
</tr>
<tr>
<td>7. Complicated</td>
<td>3. Blurred</td>
</tr>
<tr>
<td>8. Impulse</td>
<td>5. Iris</td>
</tr>
<tr>
<td>9. Cone</td>
<td>6. Socket</td>
</tr>
</tbody>
</table>

**Page 30**

**Use What You Know** Responses will vary.

**Text Structure** Responses will vary.

**Reading Strategy: Use Visuals** Students should draw a check mark next to one of the figures in the reading. Responses will vary.

**Page 31**

**Comprehension Check** Students should underline: they have many traits that exist in only two forms and garden peas produce a large number of offspring in one generation. Responses will vary but students note that it would be more complicated to study traits that take many forms, or that there would be less data to study if the plants produced fewer offspring.

**Text Structure** Students should circle the word *data.* Thus, it is easy to collect large amounts of information to analyze.

**Reading Strategy: Use Visuals** Students should draw boxes around the labels *Petal, Pistil, and Stamens.* Responses will vary. Students might indicate that the picture shows what the pistil and stamens look like or how the petals surround the pistil.
Comprehension Check  Students should explain that pollen from one flower lands on the pistil of the same flower. Students should circle the term self-pollinating.

Text Structure  Students should draw a box around the subheading Mendel’s Experiments. This section will describe the experiments Mendel performed on pea plants to learn more about inherited traits.

Comprehension Check  Students should underline To produce purebred plants, Mendel allowed peas with one particular trait to self-pollinate for many generations. In their own words, students should explain that a purebred plant is one that always produces offspring with the same form of a trait as the parent.

Comprehension Check  Students should underline the sentence In his first experiment, Mendel crossed purebred tall plants with purebred short plants. The parents were called the P generation. The offspring were called the F₁ generation.

Reading Strategy: Use Visuals  Students should draw boxes around P Generation, F₁ Generation, and F₂ Generation. The text explains which types of plants belonged to which generation.

Comprehension Check  Responses will vary, but students should explain that Mendel probably expected that some offspring would be tall and some would be short.

Comprehension Check  Students should underline the sentence Mendel let the plants in the F₁ generation grow and allowed them to self-pollinate. Responses will vary but should include the idea that the shortness trait had reappeared.

Text Structure  Students should circle F₁ twice and F₂ twice. Students should indicate the subscript is used to distinguish the two offspring, or filial, generations.

Comprehension Check  Students should underline He found that about three fourths of the plants were tall, while one fourth of the plants were short. Approximately 15. One fourth of 60 plants were short.

Page 35

Reading Strategy: Use Visuals  Students should underline the caption Figure 3. Traits of pea plants. The caption explains that different traits of pea plants are shown on the chart.

Text Structure  Students should list three of the following: seed shape, seed color, seed coat color, pod shape, pod color, flower position, or stem height.

Comprehension Check  Only one form of the trait appeared in the F₁ generation. However, in the F₂ generation the “lost” form of the trait always reappeared in about one fourth of the plants. Students should draw a box around the term F₂ generation.

Page 36

Text Structure  Students should circle the subheading Dominant and Recessive Alleles. Responses will vary. A possible answer is What is the difference between dominant and recessive alleles?

Comprehension Check  Students should underline Mendel went on to reason that one factor in a pair can mask, or hide, the other factor. The tallness factor masked the shortness factor in the F₁ generation.

Reading Strategy: Use Visuals  Responses may vary. Students might suggest showing pictures of the male and female parents or including a chart to show which factors might be contributed by the male parent and which might be contributed by the female parent.

Page 37

Comprehension Check  Students should underline the sentence They call the different forms of a gene alleles (uh LEELZ). The gene that controls stem height has two alleles, one allele for tall stems and one allele for short stems.

Text Structure  Students should circle (uh LEELZ). Responses will vary.

Comprehension Check  Students should draw a box around two alleles. Pea plants can inherit either two alleles for tall stems, two alleles for short stems, or one of each.

Page 38

Comprehension Check  Students should underline Some alleles are dominant, while other alleles are recessive. Dominant alleles

Text Structure  Students should circle the term organism. Responses will vary.

Comprehension Check  Students should draw a box around the word dominant. Only a pea plant with two recessive alleles for stem height has short stems.
Page 39

Comprehension Check  The two stem height alleles were the same in purebred plants. No, both types of plants only had two alleles for stem height.

Text Structure  Students should underline The F₁ plants are called hybrids (HY bridz) because they have two different alleles for the trait.

Responses will vary. Students should indicate that all the F₁ plants are tall because the dominant allele for tall stems masks the recessive allele for short stems.

Comprehension Check  Students should circle the sentences Other plants inherited two recessive alleles for short stems. These plants were short. The tall plants were the ones that inherited two dominant alleles for tall stems or one dominant allele for tall stems and one recessive allele for short stems.

Page 40

Text Structure  Students should draw a box around the term shorthand.

Responses will vary. Answers should indicate students understand that shorthand means a fast method of writing using shorter forms to represent words and phrases.

Comprehension Check 1. F 2. t

Students should underline the designation Tt.

Reading Strategy: Use Visuals  Students should circle the allele labels (“TT” etc.) under the plants. Responses will vary, but students will probably note that the new labels help them understand the way the allele designations represent traits.

Page 41

Comprehension Check  Students should underline the sentence Unfortunately, other scientists did not understand the importance of Mendel’s research.

Responses will vary. Students might indicate that the research was too ground-breaking for them to understand.

Text Structure  Students should draw a box around the term observations. They had made many of the same conclusions drawn from carefully watching as Mendel had.

Comprehension Check  Students should circle the phrase the Father of Genetics.

Responses will vary.

Page 42

Retell It!  Responses will vary.

Reader’s Response  Responses will vary.

Think About the Skill  Responses will vary.

Page 44

Edit for Meaning

Paragraph 1 error: seed size
Correction: seed coat color

Paragraph 2 error: three fourths
Correction: one fourth

Page 45

Focus on Details
1. monastery 7. data
2. peas 8. genes
3. genetics 9. recessive
4. trait 10. hybrid

Page 48

Use What You Know  Responses will vary.

Text Structure  Students should circle the first paragraph.

Responses will vary. Students might indicate that including the story about her uncle puts a human face on the topic for the reader.

Reading Strategy: Monitor Comprehension  Responses will vary.

Page 49

Comprehension Check  Students should circle the word social in the second sentence.

Responses will vary. Students might indicate that it might be harder for an elderly person to make new friends or get a new job.

Reading Strategy: Monitor Comprehension  Students should draw a box around the word relative in the first sentence of the second paragraph.

Responses will vary.

Comprehension Check  Students should underline from about age 40 in 1900 to age 77 today.

Responses will vary. Students might indicate that many families have members of several different generations or grandparents can be a wide range of ages.
Page 50

Reading Strategy: Monitor Comprehension
Students should restate the main idea. Whatever the differences among individuals, the experience of aging is to some extent affected by a society’s attitudes towards its elders in their own words.

Comprehension Check Responses will vary. Students should underline a stereotype from the paragraph, such as We may believe that the elderly regret that they are no longer young, etc. Responses will vary.

Text Structure Students should circle the word extend. Responses will vary. Sample answers include stretch, spread, branch out, etc.

Comprehension Check Students should draw a box around extended family. Responses will vary. Students might mention the fact that in an extended family, the older generation might help out with child care, etc.

Page 51

Comprehension Check Students should draw a box around the subheading. The Generation Gap. Responses will vary.

Reading Strategy: Monitor Comprehension Students should underline the sentence. Different generations often still struggle with what has famously been called the generation gap. Responses will vary.

Comprehension Check
1. Try to understand each other
2. Mutual consideration for each other
3. Negotiate to reach an agreement

Page 52

Comprehension Check Students should draw boxes around the words competition and cooperation in the second sentence of the first paragraph. Responses will vary.

Text Structure Students should circle the word honored, which is a synonym for revered. Responses will vary.

Reading Strategy: Monitor Comprehension Students should underline. Traditionally, in East Asian cultures such as those of Japan, China, and Korea, individuals who reach old age are revered, honored for their experience, knowledge, and wisdom. Responses will vary.

Page 53

Comprehension Check Students should underline the following, Asian cultures, African-American, Arab, and Hispanic.
Paragraph 2 error: who are young
Correction: who reach old age
Responses will vary, but underlined sentence should be corrected so that it states that individuals who reach old age are revered.

Page 59
Focus on Details
1. YOUTH
2. NINETEENTH
3. AGRICULTURAL
4. NUCLEAR
5. EXTENDED Answer: IMMIGRANTS

Page 62
Use What You Know Responses will vary.
Text Structure Students should circle the years 1915 and 1920.
At that time, the number of African Americans who moved to the North greatly increased.
Reading Strategy: Summarize Responses will vary. Student summaries should explain that in the early 1900s more and more African Americans moved from the South to cities in the North.

Page 63
Comprehension Check Students should circle Great Migration.
Responses will vary.
Text Structure Students should draw a box around the subheading Seeking a New Start.
Responses will vary, but should mention limitations on blacks' rights in the South.
Comprehension Check Students should underline the sentence Most of the former slave-holding states passed what became known as “Jim Crow” laws—laws that discriminated against African Americans.
Responses will vary. Students might indicate that Jim Crow laws prevented African Americans from having access to the same things as European Americans.

Page 66
Comprehension Check Students should circle car, boat, and train.
Responses will vary, but may mention separation.
Text Structure Students should circle the word barred.
Responses will vary.
Reading Strategy: Summarize Students should underline the sentence Although the migrants faced many obstacles in their new homes, life in some ways was improved.
Responses will vary.

Page 67
Comprehension Check Students should draw a box around the following passage For example, Detroit’s African-American population increased by more than 600 percent in ten years. Philadelphia’s rose by 500 percent.
Responses will vary, but may mention high death rates, overcrowding, and health problems.
Reading Strategy: Summarize Responses will vary.
Comprehension Check Students should underline the sentence Even some well-to-do African Americans, born and raised or long settled in the urban North, did not at first accept the migrants.
Responses will vary. Students might describe differences in education or prior work experience on farms instead of in factories or mills.
Page 68
Text Structure  Students should circle the word erupted.
Racial violence happened suddenly in the North as well as in the South.
Comprehension Check  Students should draw a box around East St. Louis.
Tensions created by a labor strike, followed by rumors of a shooting, sparked the riot.
Reading Strategy: Summarize  Responses will vary.

Page 69
Comprehension Check  Students should underline NAACP and National Urban League.
Responses will vary, but may mention the persistence of inequality/racism.
Reading Strategy: Summarize  Students should circle the heading Community and Identity.
Responses will vary.
Text Structure  Students should draw a box around the word separatism.
Responses will vary.

Page 70
Text Structure  Students should circle the term labor unions.
Responses will vary. Students might indicate that labor unions help protect workers' rights.
Comprehension Check  Students should underline blues and jazz thrilled admirers of all races.
Responses will vary.
Reading Strategy: Summarize  Responses will vary. Student summaries should explain it was a period when the African American artists flourished in Harlem, a neighborhood in New York City.

Page 71
Text Structure  Students should underline the start of the Great Depression.
It slowed down the migration of African Americans from the South to the North.
Comprehension Check  Students should underline the phrase prejudice, segregation, and discrimination. African Americans had formed strong new communities and developed a vital new sense of identity.
Reading Strategy: Summarize  Responses will vary.

Page 72
Retell It!  Responses will vary.
Reader's Response  Responses will vary.
Think About the Skill  Responses will vary.

Page 74
Edit for Meaning
Paragraph 1
Error: white voters
Correction: black voters
Paragraph 2
Error: Federal government
Correction: state government

Page 75
Focus on Details
Across
<table>
<thead>
<tr>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PREJUDICE</td>
</tr>
<tr>
<td>3. RELATIVELY</td>
</tr>
<tr>
<td>5. DEPRESSION</td>
</tr>
<tr>
<td>8. EQUALITY</td>
</tr>
<tr>
<td>10. ADVOCATE</td>
</tr>
</tbody>
</table>

Page 78
Use What You Know  Responses will vary.
Text Structure  Students should draw a box around the subtitle An Interview with Mark Moffett by Alex Chadwick.
The subtitle tells you the article is an interview, who is being interviewed, and the name of the interviewer.
Reading Strategy: Distinguish Fact from Opinion  Students should circle unique, alien, and simple.
Responses will vary.

Page 79
Comprehension Check  Students should underline moving around constantly as they run out of food.
Responses will vary, but may mention that there is not enough available food.
Text Structure  Students should circle massive.
And the really critical thing is the way they actually attack, the way they work together in these very large raids that they organize.
Reading Strategy: Distinguish Fact from Opinion  Students should underline they are migratory, moving around constantly as they run out of food.
It is a fact because it can be proven to be true.

Page 80
Text Structure  Students should circle MM and AC.
Responses will vary, but may mention opposing viewpoints and ease of reading.
Comprehension Check  Students should draw a box around You could imagine being down at the ant’s level and suddenly, over the crest of the hills, would appear untold numbers of horrific warriors rushing ahead. Responses will vary.

Reading Strategy: Distinguish Fact from Opinion  Students should underline They’re often called “driver ants” in parts of the world because they actually drive their prey ahead of them. It is a fact because it can be proven to be true.

Page 81
Comprehension Check  Students should underline Basically all they can do is tell night from day. They use smell and vibrations to move around and communicate with each other.
Text Structure  Students should circle the word potentially. Responses will vary.
Comprehension Check  Students should underline through very simple communication symbols, they can organize vast groups. This fascinates many scientists because they can see how this might apply to other areas of science, such as technology.

Page 82
Comprehension Check  Students should underline A single army ant is basically incompetent—it’s a soldier trained to do certain things very well. No, the intelligence of a single ant does not matter because there are thousands of them acting together.
Text Structure  Students should circle the word swarm. Responses will vary. Students should list insects such as bees, mosquitoes, flies, wasps, etc.
Reading Strategy: Distinguish Fact from Opinion  Students should underline the sentence They’re killing huge numbers of prey constantly during these attacks. It is fact because it can be proven to be true. Responses will vary. Students might suggest counting the number of prey killed, for example.

Page 83
Comprehension Check  Students should draw a box around over 130 species. America
Text Structure  Students should underline workers within one ant colony can vary quite a bit in size and shape and do different tasks or play different roles. Responses will vary. Students might suggest that polymorphism can be helpful because there is a variety of different workers within a group.

Comprehension Check  Students should draw a box around people like entomologists and anybody silly enough to get close to army ants. They attack vertebrates. They do this to protect the colony.

Page 84
Reading Strategy: Distinguish Fact from Opinion  Students should underline the sentence I’m doing this book for Harvard and I’m going around the world, often looking for the coolest jaws going. It is an opinion because it can’t be proven to be true.
Text Structure  Students should circle the term bizarre. Responses will vary. Sample answers include odd, weird, etc.
Comprehension Check  Students should draw a box around to pierce vertebrates. They can bite deeply, perhaps to the bone.

Page 85
Comprehension Check  Students should circle the word gorgeous. Responses will vary.
Reading Strategy: Distinguish Fact from Opinion  Students should underline these look like alien creatures, maybe from a bad dream. Moffett also thinks they look alien, but in a good way.
Comprehension Check  Students should underline a lot of the genetics. Responses will vary.

Page 86
Retell It! Responses will vary.
Reader’s Response Responses will vary.
Think About the Skill Responses will vary.

Page 88
Edit for Meaning Paragraph 1 error: moving in a very disorganized way Correction: moving in a very organized way Paragraph 2 error: farmer Correction: soldier

Page 89
Focus on Details 1. DECEPTIVELY 6. SIGNALS 2. SPECIES 7. BLIND 3. GENETICS 8. BONE 4. ELABORATE 9. POLYMORPHISM 5. MIGRATORY
Answer: SOLDIERS
Use What You Know  Responses will vary.

Text Structure  Students should circle 800 kilometers per hour (500 mph) and 15 minutes.

Reading Strategy: Identify Cause and Effect
Students should draw a box around Tsunamis have very long wavelengths.
Responses will vary, but should include the idea that tsunamis reach shore with a great deal of force that’s too strong to outrun, which means people can be hurt or killed.

Comprehension Check  Students should underline
A tsunami begins when an underwater disturbance suddenly displaces a column of water.
Responses will vary, but should include the idea that a lot of water is displaced and energy is released.

Comprehension Check  Students should underline
Tsunami waves in the open ocean are difficult to see because their long wavelengths stretch them out and keep them low.
These waves are often less than a few feet high out on the ocean.

Reading Strategy: Identify Cause and Effect
Students should circle When a tsunami wave reaches shallower water, the bottom of the wave begins to drag along the ocean floor.
Responses will vary, but should mention that water piles up behind the wave and it grows taller.

Text Structure  Students should draw a box around massive.
Responses will vary.

Comprehension Check  Students should underline
Tides are the regular, daily rise and fall in water levels.
Responses will vary, but should indicate that tidal waves are regular and predictable and not as fast or strong as tsunamis, which are irregular and rare events.

Reading Strategy: Identify Cause and Effect
1. Underwater earthquake; 2. Underwater volcano
Students should underline the sentence Both of these events cause a large amount of water to move, sending waves speeding out in all directions.

Text Structure  Students should draw a box around a state of balance.
Responses will vary.

Comprehension Check  Students should circle The main differences between tsunami waves and normal ocean waves are size, speed, and origin.
Responses will vary, but should include the idea that tsunami waves are big, fast, and triggered by violent events.

Comprehension Check  Students should circle the distance between one crest and the next.
Responses will vary, but should mention the relationship between wavelength and energy.

Text Structure  Students should draw boxes around Earthquakes and Volcanoes.
Responses will vary, but should indicate that these two sections will describe how earthquakes and volcanoes can create tsunamis.

Comprehension Check  Students should underline
Underwater earthquakes are more likely to cause large tsunamis that travel across the entire ocean.
Responses will vary, but should include the idea that if the ocean floor heaves up or drops down, that will cause a disturbance on the water’s surface.

Reading Strategy: Identify Cause and Effect
Students should circle tons of rock and lava.
Responses will vary, but should include the displacement of water.

Reading Strategy: Identify Cause and Effect
Students should circle above the water and in the ocean, where there are underwater mountains.
A landslide can cause a tsunami because rock and dirt from the landslide quickly displace a lot of water, creating a tsunami.
Comprehension Check  Students should underline
An asteroid could cause a tsunami by crashing into the
ocean and displacing a large volume of water.
No, because this has never been recorded in
human history.

Text Structure  Students should draw a box around
become extinct.
Responses will vary.

Page 99
Text Structure  Students should draw a box around
the bulleted list at the top of the page under the
heading What you will need.
The list names all the things you need to simulate a
tsunami and complete the experiment.

Comprehension Check  Students should circle Pack
the sand against one of the short sides of the container.
Shape it into a slope.
The sand represents the side of a hill or a mountain on
a shore.

Reading Strategy: Identify Cause and Effect
Students should underline The largest clump will cause
the most destruction on shore.
It simulates the displacement of water that causes a
tsunami.

Page 100
Retell It!  Responses will vary.
Reader's Response  Responses will vary.
Think About the Skill  Responses will vary.

Page 102
Edit for Meaning
Paragraph 1 error: When a volcano at the bottom
of the sea erupts
Correction: When a volcano located near the shore
erupts
Paragraph 2 error: The second way starts on the
ocean's surface.
Correction: The second way starts underwater.

Page 103
Focus on Details
1. energy  6. harbor
2. equilibrium  7. geologists
3. waves  8. drags
4. indian  9. lava
5. earthquakes  10. tidal

Page 106
Use What You Know  Responses will vary.
Reading Strategy: Compare and Contrast
Students should underline Plants are found only in
the sunlit surface waters, where there is enough light for
growth.
Responses will vary, but should explain that animals
are found at all depths of the oceans, including the
sunlit zone.

Text Structure  Students should circle 500 meters
(1,640 ft.).
Sperm whales find squid at great depths.

Page 107
Comprehension Check  Students should circle
oceanographers.
Responses will vary, but may include the idea that
it can be helpful to divide it into zones to better
understand how the plants and different animals live
in those areas.

Text Structure  Students should underline
Oceanographers divide the ocean up into broad zones,
according to how far down sunlight penetrates.
1. Sunlit zone; 2. Twilight zone; 3. Dark zone;
4. Abyss

Reading Strategy: Compare and Contrast
Students should draw boxes around dark zone and
abyss.
Responses will vary, but should mention that the
temperatures are colder there than in the other zones
and that the abyss is much deeper than the dark zone.

Page 108
Comprehension Check  Students should draw a
box around minute.
Responses will vary, but should include the idea that
they are very tiny.
**Reading Strategy: Compare and Contrast**
Students should underline *along the ocean’s surface.*
Responses may vary, but may include the idea that like other plants, they need sunlight and nutrients to grow, but unlike them they live in the ocean.

**Comprehension Check**  Students should circle Vast “meadows” of plant plankton are found in cooler waters where nutrients are brought up from the bottom during storms.
There are fewer nutrients in the tropics.

**Page 109**
**Comprehension Check**  Students should underline *animal plankton.*
Responses will vary, but should note that animals eat plants for their nutrients and that animal plankton are too small to eat anything else.

**Text Structure**  Students should draw a box around *predator.*
Responses will vary.

**Reading Strategy: Compare and Contrast**
Students should circle *herring* and underline *dolphins, whale sharks or blue whales.*
Responses will vary, but should mention that they both eat ocean animals, but small fish eat animal plankton while larger animals eat the fish.

**Page 110**
**Comprehension Check**  Students should circle *fish, mammals, and reptiles.*
Responses will vary, but should include the idea that it is easier for scientist to explore the sunlit zone.

**Reading Strategy: Compare and Contrast**
Some animals inhabit the sunlit zone and others visit it to feed.
Responses will vary, but should include the idea that when you inhabit a place you live there permanently and when you visit you are only there temporarily.

**Comprehension Check**  Students should underline to feed.
Responses will vary, but should mention the scarcity of food in deeper zones.

**Page 111**
**Reading Strategy: Compare and Contrast**
Students should circle *polyp.*
Responses will vary, but should contrast the hard skeleton with the soft body.

**Text Structure**  Students should draw a box around *microscopic.*
Responses will vary.

**Comprehension Check**  Students should underline *microscopic, single-celled algae.*
Responses will vary, but should note that algae needs sunlight to grow.

**Page 112**
**Comprehension Check**  Students should underline *They support an extraordinary variety of marine life, from multitudes of brightly colored fish to giant clams wedged into rocks.*
Responses will vary but should include that the reefs provide places for animals to find hiding places and shelter.

**Text Structure**  Students should draw a box around *wedged.*
Responses will vary.

**Comprehension Check**  Students should circle *coral caves and crevices.*
It recycles scarce nutrients from the clear, blue tropical waters.

**Page 113**
**Text Structure**  Students should draw a box around *The Twilight Zone.*
Responses may vary, but should indicate that this section will describe the environment of the twilight zone and the animals that live there.

**Comprehension Check**  Students should underline *Between the bright sunlit waters of the upper ocean and the pitch-black depths is the half-light of the twilight zone.*
Responses will vary, but should mention the dimness of the light, which might look similar to the dimming light that occurs just after sunset.

**Reading Strategy: Compare and Contrast**
Students should circle *lantern fish* and *a variety of squid,* and underline *lancetfish.*
Responses will vary, but may mention that they have adapted to different environments.

**Page 114**
**Comprehension Check**  Students should circle *black.*
Responses will vary, but should mention that this color makes them invisible to predators.

**Text Structure**  Students should draw a box around *scarce.*
Food is hard to find in the cold, dark depths.

**Comprehension Check**  Students should underline *Being lightweight helps fish in the dark zone maintain neutral buoyancy.*
Responses will vary, but may include the idea that this lets them spend less energy in their food-scarce environment.
Page 115
Text Structure  Students should draw a box around
The bottom of the deep ocean is not an easy place to live.
The list should contain the following:
1. pitch-black;  2. water is almost freezing;  3. little food
Reading Strategy: Compare and Contrast
Students should underline Some grow anchored to
the seabed and have long stems to keep their feeding
structures clear of the ooze.
Responses will vary, but should indicate that other
animals can walk around, but both kinds avoid stirring
up the ooze.
Comprehension Check  Students should circle
Some animals, such as sea cucumbers, feed on the seabed
by extracting food particles from the ooze.
Responses will vary.

Page 116
Retell It!  Responses will vary.
Reader’s Response  Responses will vary.
Think About the Skill  Responses will vary.

Page 118
Edit for Meaning
Paragraph 1 error: cool in the summer and warm in the winter
Correction: warm in the summer and cool in the winter
Paragraph 2 error: which has plenty of light and is
not as deep as the other zones
Correction: which is darker and deeper than the other zones

Page 119
Focus on Details
1. sunlight  6. polyps
2. tentacles  7. lanternfish
3. twilight  8. extract
4. dark  9. tropics
5. plankton  Answer: shelter

Page 122
Use What You Know  Responses will vary.
Text Structure  Students should circle the word
prosperous and underline rich and successful.
Responses will vary.
Reading Strategy: Identify Problems and Solutions  Students should underline they had
created a surplus of crops. As a result, the price of wheat
and other crops had fallen.
Responses will vary, but should indicate that the farmers
borrowed money from banks to continue farming.

Page 123
Comprehension Check  Students should underline
If the price of a stock dropped, the investor lost money.
Responses will vary, but should indicate that buying
stocks on margin means that an investor borrows
money from a bank or other financial institution to
make the investment.
Text Structure  Students should underline The Stock
Market Crash.
Responses will vary, but should indicate that the stock
market was not going to do very well.
Comprehension Check  Students should underline
On October 24, 1929, a day that came to be called Black
Thursday, investors panicked and rushed to sell their
stocks.
Responses will vary, but should indicate that on Black
Thursday stock prices fell and many people began to
lose money on the stocks they owned.

Page 124
Comprehension Check  Students should underline
Although the stock market crash alone did not cause the
Great Depression, it signaled that the catastrophe had
begun.
It occurred on Tuesday, October 29, 1929 and was
called Black Tuesday.
Text Structure  Students should circle The downturn
in the economy affected almost everyone, rich and poor
alike.
Responses may vary. Students should list two of the
following details: Men and women raced to the bank
to remove their savings. Owners shut down their
businesses. Workers were laid off. More than a quarter
of America’s work force was unemployed.
Reading Strategy: Identify Problems and Solutions  Students should underline Over the next
three years thousands of banks failed.
Responses will vary.

Page 125
Comprehension Check  Students should underline
The homeless created whole villages of flimsy tents and
cardboard shelters called “Hoovervilles” after President
Hoover, whom many blamed for the country’s woes. Some
of the homeless hid in the boxcars of trains and rode from
town to town, becoming known as tramps or hoboes.
They sold pencils and apples on the street.
Text Structure  Students should circle fertile and
underline able to produce a lot of plants.
Responses will vary.
Comprehension Check  Students should underline
Dry from drought and overuse, the soil began to blow
away in great clouds of dust.
Responses will vary, but should include three of the
following: dust covered cars, dust blew through
windows, dust settled on food, dust burned eyes, or
dust sometimes grew so thick that it blocked sunlight.
Comprehension Check  Students should circle The Tennessee Valley Authority.
Responses may vary, but should include the idea that they had electricity for the first time.

Text Structure  Students should draw a box around allocated.
Responses may vary.

Page 130
Text Structure  Students should draw a box around Roosevelt’s policies were controversial.
Responses will vary.

Reading Strategy: Identify Problems and Solutions  Students should underline They worried that New Deal programs would burden both businesses and the public with high taxes and encourage individuals to depend too much on federal aid.
Responses will vary.

Comprehension Check  Students should circle Still, the majority of Americans felt thankful to Franklin Delano Roosevelt for his achievements on their behalf.

America’s entry into World War II in 1941 brought the Great Depression to an end. Answers to the second question will vary.

Page 131
Reading Strategy: Identify Problems and Solutions  Students should draw a box around Milton Ager and Jack Yellen.
Responses will vary.

Comprehension Check  Students should underline Happy days are here again five times.
Responses will vary, but students should point to the optimism of the song as one reason Roosevelt would have chosen it.

Page 132
Reading Wrap-Up
Retell It!  Responses will vary.

Reader’s Response  Responses will vary.

Think About the Skill  Responses will vary.

Page 134
Paragraph 1 error: had tons of money to buy things, production increased at a fast pace
Correction: had little or no money to spend, production slowed almost to a stop

Paragraph 2 error: workers were able to find new and better-paying jobs
Correction: workers were laid off
Across
5. BOXCARS
7. HOOVERVILLES
9. HOMELESS

Down
1. INVESTOR
2. ELECTRICITY
3. ROOSEVELT
4. PENSION
5. BREADLINES
6. DROUGHT
8. ECONOMY

Page 138
Use What You Know
Answers will vary.

Text Structure
Students should circle Extreme Weather.
Responses will vary.

Reading Strategy: Use Prior Knowledge
Students should underline one detail they already knew from the first paragraph.
Responses will vary.

Page 139
Comprehension Check
Students should underline Because of Earth’s position and movement in relation to the sun, the sun’s heat makes our world warmer in certain places, such as near the equator; at certain times, such as mid-day; and during certain seasons, such as summer. The sun’s energy takes the form of heat. The heat warms the earth and the earth warms the air.

Text Structure
Students should underline When a large body of air has the same basic temperature and moisture throughout, it is called an air mass.

Responses will vary.

Reading Strategy: Use Prior Knowledge
Students should underline two details they already knew about thunderstorms.
Responses will vary.

Page 140
Comprehension Check
Students should underline When masses of warm, humid air collide with masses of cooler or cold air, dramatic weather events such as storms often take place. Dramatic weather events such as storms take place.

Text Structure
Students should circle changes from liquid to gaseous form and draw a box around changes from gas to liquid form.

Responses may vary, but should indicate that they are not the same. When something evaporates it changes from a liquid to a gas and when it condenses the opposite happens, it changes from a gas to a liquid.

Comprehension Check
Students should underline Without it, everything would die.
It falls back to the ground as precipitation in the form of rain, hail, or snow.

Page 141
Comprehension Check
Students should underline Thunderstorms occur when a mass of warm, humid air meets and rises up violently through cooler air, releasing tremendous energy and creating turbulence and drenching rains.

No. Only warm air rises; cool air sinks.

Text Structure
Students should circle up to 40 miles per hour.
Responses will vary.

Reading Strategy: Use Prior Knowledge
Students should underline two details they already knew about thunderstorms.
Responses will vary.

Page 142
Reading Strategy: Use Prior Knowledge
Students should underline Wind-blown snow can make it impossible for someone caught in a blizzard to see beyond a few inches and can create drifts more than 20 feet deep.

Responses will vary.

Text Structure
Students should underline The most furious storms on earth are known as hurricanes in the United States and as cyclones or typhoons elsewhere in the world.

Responses will vary.

Comprehension Check
Students should circle As the storm is blown by wind, it gathers up heat and energy from the warm water.
They begin over warm, tropical waters, such as the Caribbean Sea.

Page 143
Text Structure
Students should underline Some hurricanes are as huge as 600 miles across, and all hurricanes have raging winds between 75 and 200 miles per hour.

Responses will vary, but students might describe the impact on human lives, such as homes collapsing, flooding, loss of life, people drowning, and public utilities such as electricity collapsing.

Comprehension Check
Students should underline The winds spin in a circle around a calm center called the hurricane’s eye.

Responses will vary.

Reading Strategy: Use Prior Knowledge
Students should underline Drought.
Responses will vary.

Page 144
Comprehension Check
Students should underline Plants and trees also hold water in their leaves and roots. It comes from underground rivers and precipitation.

Text Structure
Students should circle plow up.
Responses will vary.
Comprehension Check Students should underline If the ground becomes dry from over-planting, the process of evaporation, condensation, and precipitation is interrupted. Responses may vary, but should indicate that farmers destroyed all the grass and over-planted.

Page 145
Reading Strategy: Use Prior Knowledge Students should circle Forecasting the Weather. Responses will vary.
Text Structure Students should draw a box around predict. Responses will vary.
Comprehension Check Students should underline In recent years, technological advances have brought considerable improvements to the science of weather forecasting. Responses will vary, but may include that even though extreme weather may be forecasted, there may be nothing to do to prevent it from happening and that forecasting is not an exact science.

Page 146
Reading Wrap-Up Retell It! Responses will vary.
Reader’s Response Responses will vary.
Think About the Skill Responses will vary.

Page 148
Paragraph 1 error: Hurricanes quickly gain speed once they reach land.
Correction: Hurricanes slowly lose power once they reach land.
Paragraph 2 error: the hurricane’s fury quickly dies down
Correction: the hurricane’s fury returns

Page 149
1. AIR MASS 6. HEAT
2. WATER CYCLE 7. LIGHTNING
3. PRECIPITATION 8. BLIZZARDS
4. CLIMATE 9. DROUGHT
5. HURRICANE Answer: TORNADO ALLEY

Page 152
Use What You Know Responses will vary.
Text Structure Students should underline the Montgomery Bus Boycott; the sit-ins; and the Birmingham campaign. Responses will vary but should indicate that the introduction lets readers know they will be reading about important incidents that took place during the Civil Rights movement.

Reading Strategy: Take Notes Students should circle December 1, 1955. Responses may vary, but should indicate that Parks was African American and in many parts of the South it was against the law for an African American to refuse to give up his or her seat to a white person.

Page 153
Comprehension Check Students should circle the NAACP. Rosa Parks was small, soft spoken, and well liked by members of the community.
Reading Strategy: Take Notes Students should underline not riding the public buses for one day. Responses will vary. Sample answers: “The Aftermath of Rosa Parks’s Arrest” or “The Call for a Boycott.”
Text Structure Students should draw a box around enact. He saw the boycott as an ideal way to bring about social reform through nonviolent protest.

Page 154
Comprehension Check Students should underline over a year. Responses will vary, but should indicate that people might not have a way to get to places they needed to go and had to walk or find rides.
Reading Strategy: Take Notes Students should underline “Hate cannot drive out hate,” he said. “Only love can do that.” Responses will vary.

Page 155
Comprehension Check Students should circle Leaflets. Responses will vary.
Reading Strategy: Take Notes Students should underline the Supreme Court ruled that Alabama’s bus segregation law was unconstitutional. It meant that African Americans could ride the bus without being forced to get up when white people wanted their seats.

Page 152
Use What You Know Responses will vary.
Text Structure Students should underline the Montgomery Bus Boycott; the sit-ins; and the Birmingham campaign. Responses will vary but should indicate that the introduction lets readers know they will be reading about important incidents that took place during the Civil Rights movement.

Reading Strategy: Take Notes Students should circle which involves breaking a law one considers unjust in order to change it. They did not leave the counter.
Page 156

Comprehension Check  Students should circle

Word quickly spread around college campuses and

African-American students in other cities throughout the
country began to enact similar sit-ins at segregated lunch
counters, with many targeting the Woolworth Company
in particular.

Responses may vary, but should indicate that only four
students protested on the first day.

Reading Strategy: Take Notes  Students should underline Whenever this occurred, a new group of students quickly took their places at the counter.

Responses will vary.

Text Structure  Students should underline over 70,000 African Americans across the country had participated in sit-ins, and more than 3,000 had been

arrested.

Seventy thousand participated and three thousand
were arrested.

Page 157

Comprehension Check  Students should underline

Many campus organizers of sit-ins would take on adult

leadership roles within the civil rights movement in the
years to come.

Responses will vary.

Text Structure  Students should circle the article entitled “Group Asks Protest Support.”

Responses may vary but should indicate that it is part of

a news article. The headline and byline are two
clues that help identify it.

Reading Strategy: Take Notes  Students should circle the Human Relations Committee of the North Carolina Council of Churches and the North Carolina
Baptist State Convention’s Department of Interracial

Cooperation.

Responses will vary.

Page 158

Text Structure  Students should circle the word

picket.

Responses will vary.

Comprehension Check  Students should underline

hotels and restaurants.

Responses will vary, but may indicate that slavery

was once the accepted way of life in that part of the
country.

Reading Strategy: Take Notes

1. They were in worse condition.
2. They had fewer supplies and other resources.

Page 159

Comprehension Check  Students should underline

He prevented civil rights organizers from holding rallies,

and during peaceful protests he had many African-

American demonstrators arrested.

He was more moderate in his attitude toward

segregation.

Reading Strategy: Take Notes  Students should circle Eugene “Bull” Connor and Dr. Martin Luther King Jr.

2. Martin Luther King Jr., fought to integrate

Birmingham.

Comprehension Check  Students should underline

sit-ins and marches.

Nonviolent; they did not hurt anyone or anything.

Page 160

Reading Strategy: Take Notes  Students should circle “Letter from Birmingham Jail.”

Responses will vary, but should indicate that the letter

was written to the public while he was in jail and that

it explained the importance of civil disobedience to

the civil rights movement.

Text Structure  Students should draw a box around

penalty.

Possible answer: One who breaks an unjust law must
do so openly, lovingly, and with a willingness to accept
the punishment.

Comprehension Check  Students should underline

Many African Americans risked losing their jobs if they
marched, and fewer demonstrators were willing to go
to jail.

Responses will vary.

Page 161

Comprehension Check  Students should circle another thousand.

Responses may vary, but should indicate that on the
first day, the police avoided using force when they
arrested the students, but on the second day, the
police unleashed dogs and turned high-pressure fire-
hoses on the students.

Reading Strategy: Take Notes  Students should underline Public outrage led President Kennedy’s administration to intervene and serve as mediators
between Birmingham’s city officials and SCLC.

1. Business leaders agreed to integrate their

establishments.
2. They also agreed to do away with discriminatory

hiring practices.

Text Structure  Students should draw a box around

the last paragraph.

Responses may vary, but should indicate that television
images made it clear that segregation was wrong.
Page 162
Retell It! Responses will vary.
Reader’s Response Responses will vary.
Think About the Skill Responses will vary.

Page 164
Paragraph 1 error: Birmingham, Alabama, was one of the most integrated cities in the South
Correction: Birmingham, Alabama, was one of the most segregated cities in the South
Paragraph 2 error: was a big supporter of integration
Correction: was a big supporter of segregation

Page 165
Focus on Details
Answers:
Across
2. CIVIL
3. SEGREGATION
7. ACCOMMODATIONS
8. BOYCOTT

Down
1. DISCRIMINATION
3. SYMBOLIC
4. SIT-IN
5. NONVIOLENT
6. INTEGRATE

Page 166
Use What You Know Responses will vary.

Text Structure Students should circle The Peace Corps: An American Ideal. Responses will vary.

Reading Strategy: Scan Students should circle the numbered list. The list describes the goals of the Peace Corps mission.

Page 168
Comprehension Check Students should underline teaching environmental awareness and planting trees within a community. Responses will vary.

Reading Strategy: Scan Students should underline all the headings. Responses may vary, but may include the idea that these are important ways to help other countries.

Comprehension Check Students should underline Volunteers help communities capitalize on technology by teaching computer skills, developing regional databases, and implementing networks for businesses and government offices. Responses will vary.

Page 169
Comprehension Check Students should underline The idea of the Peace Corps was not such a great thing to my mother. Responses will vary.

Page 170
Comprehension Check Students should underline We came to New York in 1968 because my husband had some relatives here. They moved to New York because her husband had relatives who lived there.

Comprehension Check Most importantly, Peace Corps volunteers discover the richness of another culture the best way possible: by living it. Responses will vary.

Page 171
Reading Strategy: Scan Circled key words will vary.

After college she joined the Peace Corps and was a small business development volunteer in Panama.

Text Structure Students should circle nonprofit. Responses will vary, but should indicate that nonprofit means an organization that helps others instead of making a profit.

Comprehension Check Students should underline leadership and communication skills. Responses will vary, but should indicate that business people need these skills.

Page 172
Comprehension Check Students should underline Currently I work for a nonprofit microlending organization that provides small business loans to New York City business owners. Yes.

Text Structure Students should circle As the daughter of immigrants, there is always pressure. Responses will vary.

Comprehension Check Students should underline The idea of the Peace Corps was not such a great thing to my mother. Responses will vary.

Page 173
Comprehension Check Students should underline speak to other people. Responses may vary, but an example might be that other people may have agreed with Carmenza’s decision.

Text Structure Students should circle Isabel’s Story. The first section was a profile of Carmenza. The second section tells the story of another person, Isabel.

Comprehension Check Students should underline We came to New York in 1968 because my husband had some relatives here. They moved to New York because her husband had relatives who lived there.
Page 174

Comprehension Check  Students should underline
This is a hard country, and if you want to succeed, you
have to work hard.
Responses will vary.

Text Structure  Students should draw a box
around retired.
Responses will vary.

Comprehension Check  Students should underline
But then I started thinking that she would be helping my
people, and she would see, with her own eyes, the scenes
that I told my children about when I raised them.
Answers will vary.

Page 175

Comprehension Check  Students should underline
Carmenza is a leader, so she got along very well with the
people.
Responses will vary.

Text Structure  Students should circle Update
about Carmenza.
This section will describe what Carmenza is doing
now.

Comprehension Check  Students should draw a
box around London.
She works in consumer banking for a large British
bank.

Page 176

Retell It!  Responses will vary.

Reader’s Response  Responses will vary.

Think About the Skill  Responses will vary.

Page 178

Paragraph 1 error: organize small businesses to
compete against each other for resources
Correction: organize small businesses to work
together to get resources

Paragraph 2 error: did not mean a lot to me
Correction: meant a great deal to me

Page 179

1. MALNUTRITION  6. HUMANITARIAN
2. IMMIGRANT  7. HIVAIDS
3. FINANCIAL  8. ENTREPRENEUR
4. ENVIRONMENT  9. VOLUNTEER
5. COMMUNITY  10. REGION